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**Do International and Non-international Students Experience Graduate  
Coursework Differently: The Relationship of Learning Community to  
Self-Determined Motivation**

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**Do International and Non-international Students Experience Graduate Coursework Differently: The Relationship of Learning Community to Self-Determined Motivation**

**by**

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## **Abstract**

# **Do International and Non-international Students Experience Graduate Coursework Differently: The Relationship of Learning Community to Self-Determined Motivation**

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This study attempted to explore the effect of inter- and intra-personal perceptions and practices of graduate students on their academic motivation from a Self Determination Theory perspective. Students in a large research university were surveyed to determine whether there is any association between their sense of learning community, the need for relatedness, and their reasons to be in graduate school. This study provides evidence to support the importance of the fulfillment of the need to belong in learning community. Differences between international and non-international students represented when they were engaged in their coursework as analyzed by using Ryan and Deci's (2000) Self Determination and Tajfel and Turner's (1979) Social Identity Theory.

## Table of Contents

List of Tables .....	viii
Chapter 1 Introduction .....	1
Significance of the Study .....	1
Motivation and Self Determination Theory .....	3
Social Identity and Sense of Community.....	6
Purpose.....	7
Rationale .....	8
Research Questions.....	8
Chapter 2 Literature Review.....	10
Self Determination Theory of Motivation .....	10
Sense of Community in the Learning Environment .....	17
Identity .....	23
Conclusion .....	27
Chapter 3 Method .....	29
Research Questions.....	29
Participants.....	30
Measures .....	32
Procedure .....	34
Data Analysis .....	35
Chapter 4 Results .....	38
Factor Analysis for Questionnaire 1 - Learning Community .....	38
Reliability Analysis of Survey Measures.....	42
Correlation Analysis of Survey Instruments.....	43
Initial Analysis of Survey Variables .....	45
Research Questions and Results .....	53
Chapter 5 Discussion .....	58
Discussion of Findings.....	59

Limitations .....	67
Implications for future research and for practice .....	69
Appendix A.....	71
References.....	75

## **List of Tables**

Table 1 Demographics .....	31
Table 2 KMO and Bartlett's Test .....	38
Table 3 Factor Loadings on Questionnaire #1 .....	40
Table 4 Reliability analysis for scales .....	42
Table 5 Intercorrelations among Questionnaire-1 and Questionnaire-2 subscales	44
Table 6 Overall Descriptives for Outcome Variables (n Min. Max. M SD) .....	45
Table 7 Survey Outcomes for Means by Gender.....	46
Table 8 Survey Outcomes for Means by Internationals and Non-internationals...	47
Table 9 Survey Outcomes for Means by Ethnicity.....	48
Table 10 Survey Outcomes for Means by Age.....	50
Table 11 Survey Outcomes for Means by Discipline .....	51
Table 12 Survey Outcomes for Means by Years in Graduate School .....	53
Table 13 Group Statistics for item 21 .....	55
Table 14 Independent Samples t-test results for item 21 .....	55
Table 15 Survey Outcomes for Means by Ingroup/Outgroup .....	56

# Chapter 1

## Introduction

With all the attention that learners have received lately, most has been focused on K-12 or undergraduate students, and adult learners have not as often been the focus. Graduate school is an enjoyable and challenging place of knowledge where highly interested, focused adults from different cultures enroll to enhance their potential and scholarly and professional careers. When adult learners have been the focus, researchers have commonly investigated classroom community and academic motivation in online/distance learning experiences. Additionally, there is a steady literature about the importance of relationships on students' academic success. Tinto (1993) asserted that the more students are involved with the activities of school besides their academic work, the more they improve their personal relations and connections, and this has a positive effect on their academic focus and well-being.

Despite the few studies of graduate students' experiences, not many have considered face-to-face learning environments, personal relations and motivation, while also taking cultural differences into consideration. The goal of this study was to investigate the role of interpersonal relationships of graduate students within the learning community, on their academic motivation, engagement, achievement, and emotions.

### Significance of the Study

Each year thousands of students apply to graduate programs to boost their *human capital*, improve their lives, and further their careers. Goplerud (1980) mentioned the

effect of adjustment to settling in a new life and developing social relations for graduate students. He found that as they developed good relations with the faculty and peers, their performance was enhanced and stress decreased. New graduate students experience stress due to financial and social changes and to need to adapt to their program. They greatly benefit from peer support, as shown in a study of a peer mentoring system (Bowman & Bowman, 1990). Despite the struggle to achieve balance in their lives, graduate students decide to continue their education even in anticipation of these changes due to their strong motivation to learn. As in all levels of learning, each student comes to class with different types of motivation, and an educator's main concern is how to create a learning environment to support and improve the motivation of students to get the most out of learning. Students' experiences across courses with their peers, teachers, and also with their family have an impact on their motivation and well-being.

This study was conducted to shed light on graduate students' experiences, and to focus more research attention on them, and to find ways to enhance their performance and interactions. It is important to understand how such students perceive their learning environment and what aspects affect their motivation, in order to develop more satisfactory learning environments. It was my aim for this study to see whether adult learners are affected by their social environments as much as younger students have been reported to be and whether their perceptions affect their motivation and performance in their studies.

In the following parts, I will be present a brief overview of constructs on motivation and self-determination theory, on social identity theory and sense of community followed by the purpose and rationale for my study.

### **Motivation and Self Determination Theory**

“The word motivation originates from the Latin verb *movere*, meaning *to move*” and is defined as the process of stimulation that initiates our behaviors, needs and emotions, thereby explaining the whys and wherefores of our deeds (Pintrich, 2003; Reeve, 2009). One way of describing motivation is to identify the categories of intrinsic and extrinsic motivation. Rather than taking a simple dichotomous view, Ryan and Deci (2000) presented a complex view of extrinsic motivation as composed of multiple dimensions, which are amotivation; external, introjected, identified, integrated regulation; and intrinsic motivation.

Amotivated individuals neither feel any passion for the activity nor do they see any value in it, therefore their practices lack the intention to act (Ryan & Deci, 2000). Although amotivation is not self-determined, intrinsic motivation represents the full willingness and passion to act intentionally (Hegarty, 2011). Between amotivation and intrinsic motivation, there is extrinsic motivation arising out of an instrumental reason to act. It is composed of four different forms, named as external, introjected, identified, integrated regulation. Ryan and Deci (2008) asserted that external regulation refers to engaging in an activity for utility value or to avoid negative outcomes. In introjected regulation, individuals feel some internal pressure for acting but still do not have the full

intention to act (Sunger & Senler, 2010). In the next form, a person with identified regulation is seen as somewhat internally motivated because the individual values the behavior or action, due to its personal importance (Ryan & Deci, 2008; Reeve, 2009). The last form of extrinsic motivation involves integrated regulation in which a person has internalized the values and behaviors (Deci et al., 1991). The individual is involved in the activity with his/her self-determination because the activity is important and, valuable personally; however enjoyment is not necessarily felt. There is a fine line between integrated regulation and intrinsic motivation. The intrinsically motivated person is involved in the activity for the pure pleasure of it and is thoroughly interested in the action for self-satisfaction rather than for any external outcome or utility value. Intrinsically motivated individuals do not consider work as a hassle; they can focus on it for a longer period, and approach it with creativity (Reeve, 2009). Viewing SDT from a different perspective, Vallerand et al. (1992) suggested three types of intrinsic motivation: intrinsic motivation to know, intrinsic motivation toward accomplishment, and intrinsic motivation toward stimulation.

According to Ryan and Deci (2000), one sub theory of Self Determination Theory, “Organismic Integration Theory”, considers that three basic needs humans have are autonomy, relatedness, and competence. *Autonomy* refers to the need to have freedom of choice, to self-determine one’s actions without external pressure; *relatedness* is the need to connect with others and belong; *competence* is the need to feel qualified enough to meet one’s challenges and to be effective. Ryan and Deci (2002) proposed

“competence is not an attained skill or capability, but rather is a felt sense of confidence and effectance in action” (p.7).

In this study, I investigated whether individuals’ relatedness needs would correlate with their academic motivation. Many studies have shown that students’ levels of belongingness and competence affect their motivation level. My goal was to capture the interplay of relations between needs and motivation, to shed light on ways of enhancing their performance. Recently, Beachboard et al. (2011) found that the satisfaction of the need for relatedness with peers and faculty positively affected intrinsic motivation among college students. Woodruff and Schallert (2008) claimed that before an action takes place, an individual’s motivation changes first, reflecting how competent, related, and autonomous the individual feels. In their study on the motivational and experiential dynamics of psychological needs of college students, Sheldon and Schuler (2011) found that participants’ experiences were directly related with their needs, such that students who felt a lack of connection strove for more friendships whereas those with higher needs for success strove for competence, supporting one of their hypotheses. Having good relations with peers and instructors makes it easier to feel more comfortable, to move out of their comfort zone, and get challenged (Noddings, 2005). By contrast, feeling incompetent directly affects the internalization of behaviors and relatedness to others (Ryan & Deci, 2002). College students in competitive, supportive learning environments perceive themselves more positively, more confident, and are intrinsically motivated (Faye & Sharpe, 2008).

In sum, fulfillment of the three basic needs, competence, autonomy and relatedness, enhances performance and well-being, resulting in a better process and outcomes.

### **Social Identity and Sense of Community**

In learning environments, a community exists through interpersonal relationships (Osterman, 2000). Social Identity Theory elucidates the process of group formation, identity differentiation, social comparison, and conflict (Tajfel & Turner, 1979). It addresses how individuals identify themselves as a member of one group (ingroup), distinguished from others in another group (outgroup), the process of identification, and the outcomes they bring (Turner et al., 1987). Ryan and Deci (2003) asserted that individuals gain their identity after birth through interactions with social environments in time. The reason behind our need for social identification may be related to the way human minds categorize in order to remember easily and lessen the burden of extraneous cognitive load. When we meet a person, we identify some clear aspects of the person and put the person into a category. An aspect of this categorization may be formed by whether the person fits in our definition, which consequentially forms social groups. For example, a person's clothing, accent, gestures, and the words he/she uses give clues about the person; which in turn helps us to define that person as outgoing, conservative, minority, international, etc. People tend to be involved in social groups in which they share similar interests, activities, beliefs, work, nationalism, etc. By becoming involved in a social group, we define ourselves as part of that group, as ingroup. We can also

become outgroup, depending on the social context. People perceive the community/group they choose to be involved with better than other groups and see their competence as related to being a part of that ingroup (Ryan & Deci, 2003).

Amiot and Sansfacon (2011) explained the consequences of identification with an ingroup by integrating self-determined motivation and social identity. They found that self-determined identification in a social group brings positive outcomes. Laar, Derks, Ellemers, and Bleeker (2010) argued that valuing social identities actually protects societal outcomes, increasing well-being, motivation, and performance in low-status groups. Most research has shown ingroup and outgroup context effects on ethnic minorities and in relatively younger students from different perspectives. However, not much research has been done with graduate students, perhaps because of the commonly held high expectations about graduate students who are seen as emerging professionals.

## **Purpose**

This study set out to describe the personal interactions of graduate students within their academic social environment to explain their motivational experiences. Learning environments always provide a dynamic structure with each new group of students. Graduate classes often present a blend of various cultural and academic backgrounds. In this dynamic structure, I focused on the self and environment factors while taking a component of SDT, feeling of relatedness, into consideration.

Hegarty (2011) stressed the lack of research and measurement about the experiences of graduate students and asserted the need to investigate adult learners

further. My thesis will review the current literature surrounding classroom experiences and sense of community, and the construct of self-determination theory, as well as test the applications of the theories by examining data related to the effect of intergroup relations on the academic motivation of graduate students.

## **Rationale**

This study expands on the literature on graduate students to contribute to, educators to understanding of the experiences of graduate students within the learning community. Adult learners seem to be an underrepresented, overlooked group in research, and taking into consideration their interactions and emotions would help inform ways to enhance their performance. Additionally, my study is an attempt to answer whether adult learners are as stable and as determined as we assume about their studies.

## **Research Questions**

1. Will graduate students' self-determined motivation be associated with the nature of their perceptions of the interactions they have with classmates and the instructor in class?
2. Will international students be more affected than non-international students by the use of culturally local examples or experiences used by the instructor or other students in instruction?
3. Are higher levels of feeling in-group during a class associated with higher scores on the intrinsic motivation scales and with lower scores on the extrinsic motivation and amotivation subscales?

4. Are there any differences on the learning community and self-determined motivation subscales between groups representing gender, age levels, disciplines, ethnicity, and years spent in graduate school?

## **Chapter 2**

### **Literature Review**

In this chapter, I will present a review of the literature on the topics introduced in the first chapter: Self-Determination Theory, Sense of Classroom Community and Social Identity Theory. Foundations of these constructs and how the literature has explored them in relation to graduate students will be discussed.

#### **Self Determination Theory of Motivation**

Motivation has been seen as a key process in various endeavors for decades and has developed several different definitions. Using a student's lay language I would describe motivation as the energy and willingness to be involved in the process of knowledge, exploring and playing with information towards an aim. Though such definition may sound simplistic; motivation is a complex and crucial component of the classroom experience for both learners and educators. Without motivation, learning and success are not easy to accomplish. Many theoretical constructs associated with motivation have been developed including attribution, self-efficacy, expectancy-value, achievement goal orientation, and self-determination theory. For my purposes, I focus on constructs from self-determination theory (SDT).

According to Ryan & Deci (2000) there are four subcategories of interrelated motivation theories that contribute to the Self Determination Theory (SDT) perspective including the Causality Orientations Theory, Cognitive Evaluations Theory, Organismic Integration Theory, and Basic Needs Theory.

*Causality Orientations Theory (COT)*. Deci and Ryan (1985) assert that there is a link between the causality of individuals' behaviors and the environment with which they interact. The COT offers an explanation for the motives of individual behavioral differences produced by this connection. Controlled orientations are directed to external and introjected regulation types, in which outside factors are the source of one's motive. Impersonal orientations are the source of helpless behaviors in which individuals do not feel they have the control of their lives, and this lack of control produce motivation. Autonomous orientations are connected to self-determined choices based on an individual's goals (Koestnar & Zuckerman, 1994).

*Cognitive Evaluations Theory (CET)*. This theory emphasizes the need for autonomy in addition to competence to foster intrinsic motivation, and shows the interaction between environment and individuals (Deci & Ryan, 2000). Intrinsic motivation is the wish of most educators as they try to provide the best for their students. Intrinsic motivation guarantees the best learning outcomes because participants enjoy the activity in which they are involved instead of seeing the work as a burden. For example we would assume that students who apply to graduate school want to learn more and improve their knowledge on the topics in which they are interested and are more likely to be intrinsically motivated. However in particular classroom contexts, depending on the topic (situational motivation), even an intrinsically motivated graduate student might be extrinsically motivated. Unlike extrinsic motivation, Deci and Ryan did not specify intrinsic motivation types, though they stated the possibility of different categories. Vallerand et al. (1992) proposed that having different levels of intrinsic motivation would

reflect reality of humans better than simply thinking of intrinsic motivation as being either on or off. In my study, I follow the differentiation of Vallerand et al. of three intrinsic motivation types (to know, to accomplish, to experience stimulation), and I use his Academic Motivation Scale. Vallerand et al. (1992) described *intrinsic motivation to know* as the pure joy of learning. Intrinsic motivation to know focuses on the learning outcome while *intrinsic motivation towards accomplishment* focuses on the pleasure one feels when achieving a goal. *Intrinsic motivation to experience stimulation* involves doing an activity for experiencing the stimulating feelings that happen during participation.

*Organismic Integration Theory (OIT)*. As opposed to CET, OIT focuses on how human-environment interactions foster extrinsic motivation (Deci & Ryan, 1985). The four types of extrinsic motivation are described below, moving from lower levels to higher levels of autonomy.

External regulation and introjected regulation are perceived as controlled motivations by Deci and Ryan (2008). Individuals who engage in activities because of negative or positive outcomes are *externally regulated*. Individuals who do the given work earlier and better than expected not because they are interested but to avoid having to have a boss tell them to do it, and to show how good they are, would be experiencing *introjected regulation*. During introjected regulation, the outside force is the power to get the individual to do a task. *Identified regulation* and *integrated regulation* are based on autonomy. The current education system in many countries may lead to identified regulation for most students, who instead of engaging in learning for intrinsic reasons

find themselves focused on being successful and passing tests in order to reach their goal of a dream job. The last type of extrinsic motivation is *integrated regulation*. It can easily be confused with intrinsic motivation, though at this level, individuals are pursuing their own preference of practicing an activity for the personal value of it. The difference between integrated regulation and intrinsic motivation is that in integrated regulation, there would still be some external factors, like a personal value, for engaging in an activity but pure joy of involvement does not exist.

*Basic Needs Theory*: People need to fulfill the three basic needs of autonomy, relatedness, and competence in order to foster motivation and well-being and to be productive (Deci & Ryan, 2000).

*Competence* is the need for being challenged to the limits of an individual's own capabilities. "The need for competence leads people to seek challenges that are optimal for their capacities and to persistently attempt to maintain and enhance those skills and capacities through activity" (Ryan & Deci, 2002, p. 7). Reeve (2009) asserted that when we have the skill to overcome a given task with some effort and concentration, it becomes easier to feel enjoyment, to feel effective in the task.

*Relatedness* is the need to form close, secure, communal, warm, and quality connections with others (Deci & Ryan, 1990; Reeve, 2009). The fulfillment of relatedness leads to emotional connectedness and to interpersonally involved, warm, and caring relationships (Baumeister & Leary, 1995). Student's relations with their peers and teachers may also be a predictor of their well-being. Kapikiran (2011) suggested that establishing a good relationship with others is one of the most important factors ensuring

psychological well-being. Students who feel stronger emotional connection with their parents develop confidence and relations with peers and teachers more easily and in turn, improve their academic and social skills (Martin & Downson, 2009). When students feel connected to classmates and the instructor of a class, such a feeling can allow students to initiate and accept new experiences and challenges because they feel support and care for the difficulties they may encounter (Noddings, 2005).

In a study on the motivation and academic goals of college students in an introductory psychology course, Kaufman and Dodge (2009) found that students with mastery goals were more interested about keeping close ties with the professors, valued the class more, and as a result, were having higher scores. However, in another study, college students working in groups were least affected in their interpersonal relations on their commitment to projects, whereas the need of competence kept them committed to the task (Harre & Bullen, 2010).

*Autonomy* refers to the need for freedom of choice for our actions and behaviors. When there is flexibility to make our own decisions without any internal or external controls, this fosters an internalization of the behavior (Vansteenkiste, Lens, & Deci, 2006). Regardless of how similar it may seem, autonomy should not be confused with independence because we can do a given task from our choice (autonomy) even if it is something someone else has asked us to do (Deci & Ryan, 1990).

Integrated internalization values the need for autonomy and suggests showing the utility value of the activity and identifying with awareness of the situation for a learner, when learners are given some flexibility by providing options, their self-determination of

the behavior will be improved as will their motivation (Deci et al., 1994). Reeve (2009) suggested that “autonomy supportive people listen carefully, allow others time to talk, provide rationale, encourage effort, praise progress, ask others what they want to do, respond to questions, acknowledge the others’ perspective” (p.152). Guay et al. (2008) checked the direction of representation between autonomous motivation and relatedness, among parents and friends. Representation of relatedness with parents on autonomous motivation was found to have an important effect but friends did not play as an important role. Deci and Ryan (2008) found that both receiving autonomy support from a friend and giving autonomy support to the friend contribute to need satisfaction, relationship quality, and psychological wellbeing. In another study (2000), they also asserted the relation of motivation with well-being, as higher internal motivation is linked with higher life satisfaction. At times of feeling outgroup, students are expected to enjoy their courses less, feel a decrease in their motivation, and these will be related with lower levels of course and psychological well-being.

In sum, self-determination theory represents essentially two different kinds of motivation: intrinsic motivation and extrinsic motivation. Although intrinsic motivation is focused on the core of the work to be accomplished, extrinsic motivation has types that represent a continuum of autonomy. However, there is one more type which probably is an underrepresented but a very important type: *amotivation*. For graduate students like those in my study, all three types, intrinsic, extrinsic, and amotivation, are relevant.

Although graduate students may be different from others students in their willingness to work hard, when it comes to their engagement in the classroom context, it

is reasonable to expect they will show all types of motivation. Sometimes the topic of a class is simply beyond or outside their interest or the students have other concerns such as research or assignments for another class, or outside concerns. Students who can't focus on a task are amotivated until they engage the topic (Ryan & Deci, 2000).

While students auditing classes or doing voluntary research are more likely to be intrinsically motivated, those who write a thesis for increasing the possibility of getting admitted to a more advanced program, and not for learning and gaining research experience would be extrinsically motivated. The amotivated and extrinsically motivated students may not feel as confident as the intrinsically motivated student, and may not improve and learn as much. Nevertheless, it is possible for them to transfer from one phase to another in time with an autonomy supportive environment and high quality relations.

Self-determination theory has been popularly applied to many fields and remains important to this day. In addition to students' academic lives, it has been shown relevant to explaining their well-being, which is reciprocally related to their academic performance. Many studies have shown that, in order to function efficiently especially in their academic lives, young people need to have high quality interpersonal relationships. Longfield et al. (2006) conducted a qualitative study of graduate students, and found that students who feel substantial change in their finances, socializing, interactions, and relationships, when such changes reflect a positive shift in the quality of interactions, expressed feeling guilty for having fun because there is work to be done. In addition to this, their performance and motivation of coursework may be affected by many other

factors. For example Ciani, Summers, Easter, and Sheldon (2008) investigated whether giving the option to choose their study groups themselves or to be assigned to groups by professors would affect college students' motivation. Ciani et al. (2008) found that students in the groups to which professors assigned the members were less intrinsically motivated whereas students in the other groups developed better relations and were more enthusiastic. Filak and Sheldon (2003) investigated what students care about in a college course, and their perceptions of instructors' performance. Students enjoyed smaller classes more, and they conjectured that teaching different classes instead of repeating the same course keeps instructors dynamic, and allow them to try different ways to satisfy students' autonomy and relatedness needs. As well as students, instructors also seek for quality interaction with students, and fulfillment of it benefits their sense of personal accomplishment, enhancing the joy of teaching (Klassen et al., 2012).

### **Sense of Community in the Learning Environment**

Learning environments have a dynamic nature, with learners of different educational and cultural backgrounds and with high levels of interaction, both academic and social. The word *community* first evokes the word *communication*, in which a group of individuals with shared expertise, identity, goals, beliefs, and morals interact and gain feelings of mutuality and of being together for a special aim. Contrary to the common definition, Calderwood (2000) proposed that "the basic task of community is not to make common but rather to differentiate, that is, to account for the differentiation of insiders from outsiders and of insiders from each other" (p.3). She proposed that a community

holds certain characteristics as special to that group, and each member should be competent in those specialties forming a sense of belongingness.

The interaction and shared practices of members of a community generate an emotional interconnection, a *sense of community*. McMillan and Chavis (1986) described *sense of community* as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (p. 9). They proposed four dimensions of sense of community: “*membership*- the feeling of belongingness, being a part”; *influence*- to make an impression on the group and encourage them to benefit from your ideas and creativity, being important to the group; “*reinforcement*- the feeling that members’ needs will be met by the resources received through their membership in the group; and *shared emotional connection*- the commitment and belief that members have shared and will share a history, common places, time together, and similar experiences” (p. 9). Later McMillan (1996) rearranged these four dimensions and renamed them as *spirit*, *trust*, *trade*, and *art*. *Spirit* was similar to membership, reflecting friendship; *trust* reflected the feeling that there is an authority structure that can be trusted; *trade* is the awareness that trade and mutual benefit come from being together, and *art* is a spirit that comes from the shared experiences, values that are preserved as art (McMillan, 1996). Rovai and Lucking (2000, as cited in Rovai, 2001) applied McMillan’s theory of community to classroom settings, renaming the dimensions *spirit*, *trust*, *interaction*, and *learning*. Different than the previous constructs, Rovai (2001) defined *spirit* as the combination of spirit, trade and art, *interaction* as interacting with others to improve relations, and *learning* as the

result of interactions from which a person gets perspectives and fulfillment of need to know.

Parallel to my perception, Solomon et al. (1996) considered community as “a social organization whose members know, care about and support one another, have common goals and a sense of shared purpose, and to which they actively contribute and feel personally committed” (p.720). Schools set goals to be achieved mostly in the academic sense, and they try to maintain a good connection among students, teachers, and parents, to build the sense of community and to achieve their aims to provide the right guidance to shape the future of learners. As expected, having a sense of community was found to be one of the necessary components of schools, and led to improved academic success (Solomon et al., 1996). A strong sense of community requires individuals to be responsible to each other, care about each member of the group, be able to trust one another, feel a sense of interdependency, have common goals to be achieved, common needs to be fulfilled, and develop a strong, sensible communication and empathy (Rovai & Lucking, 2003). Shouse (1996) found that when a sense of community is supported with “academic press,” especially in high SES schools, students achieve higher showing that without academic press, sense of community was not as effective in terms of academic achievement.

When a positive classroom community is established, students develop friendships, their ideas are valued by peers and the instructor, they feel pleasure from being in that learning environment and the learning itself, and dropout rates decrease (Tinto, 1993). Also in distance education, building a strong peer support and having a

trustworthy relationship with instructors and peers help everyone to have a satisfactory learning-teaching experience, because individuals share common goals and concerns, and behave responsibly (Rovai, 2002). Graduate students who feel connected to the instructor and their peers feel comfortable presenting their ideas both in distance education and classic face-to-face classrooms regardless of gender. Wade et al. (2011) explored the sense of community in online and in campus educational settings further by using group projects. Results showed that in both settings, students trusted each other depending on how much others cared about them. Particularly male learners in distance education courses did not like online group chats as much and felt the need for a deeper connection with their group members. Also, contrary to previous studies, in his work reviewing the literature on belongingness in K-12 schools, Osterman (2000) found strong connection among sense of belongingness and student engagement, higher intrinsic motivation, and higher competency values. Freeman, Anderman and Jensen (2007) investigated whether college freshman students were different than has been suggested by the literature in terms of the relation between grades and sense of community. Results showed that freshman were not much different, experiencing intrinsic motivation and self-efficacy when they built a connection with the campus and classroom community, and changing their ideas about the community depending on instructors' behaviors toward them.

In the beginning of a semester, students are more excited as well as more concerned and stressed. When cultural unfamiliarity is added to the equation, these feelings are multiplied for many. Especially true for certain ethnic groups, new students experience a harder time in adapting to new learning environment and being involved in

the community; it takes more effort for them to feel the connection with the rest (Rendon, 1994). The United States welcomes international students more than any other country. According to the Institute of International Education (2010), Open Doors Report, 296,574 international students enrolled in different levels of graduate studies during 2010/2011 academic year, representing 45.8% of the total graduate student population. Due to cultural differences and language barriers, these students may feel wary to state their opinions, or they may find topics of discussion irrelevant. Garner (1989) mentioned that being good at conversational English does not indicate enough linguistic skills necessary to succeed in an academic setting. It may be the case that international students do not feel competent and comfortable enough to involve themselves actively in class discussions. Schaps (2009) proposed there would be a positive impact from establishing a school community on culturally diverse student populations' academic and social lives by presenting them a shared aim in an autonomy-supportive learning environment. Ashar and Skenes (1993) studied whether the concepts of academic and social integration can explain retention among nontraditional students. The results showed that for adult learners, the social environment of learning is the main reason to be in an educational environment. They found that socially integrated classes were better able to keep adult learners than less socially integrated ones. Bettez (2011) argued for building a different way of community, a "critical community," and to be multi-voiced in and beyond the graduate class. She proposed the construct of critical communities and claimed these would help graduate students to feel connected to others with academic work, seeing that they are not the only ones experiencing difficulties in academic, ethnic, social, or cultural

areas. When college students were asked about the effect of others in the learning environment, they reported that their instructors were more influential in classes in which they were most engaged, whereas when the class was boring, peers had more of an effect on their sense of community (Booker, 2008).

Hill (1996) objected to the fact that sense of community is usually represented as individuals having a connection with each other; instead, she suggested that it is possible to have sense of community without any personal relations. When college students were asked to work in groups, they reported feeling a part of the class, indicating that the cooperative learning helped to improve the learning community. Osterman (2000) emphasized the connection of the basic need of “relatedness” from SDT with the “sense of classroom community” and proposed that while needs change depending on social context and the situation, they always need to be fulfilled to support the possibility of intrinsic motivation, internalization and autonomy of students. He continued with the ideas of Baumeister and Leary (1995) on the strong need for developing interpersonal relations and their effects on well-being, social, academic, and emotional lives.

Summers and Svinicki (2007) claimed that students in traditional classrooms were more performance goal oriented and did not have as much classroom interaction as the students in classrooms supportive of collaborative learning. Collaborative classrooms were supportive of feelings of connectedness in the learning environment, which was advantageous for mastery goal orientation. However, students with mastery orientations reported a strong sense of community, presenting a reciprocal relation. When instructors put effort to build a sense of classroom community, it benefits both students and

instructors, because when students enjoy the class, engage with the content, learn better, and get higher grades, the instructor is considered more effective (McKinney et al., 2006).

In sum, sense of community in the classroom is highly related with the need for belongingness. Even though the literature on graduate students is very sparse, in all levels of education, students' sense of belonging should be supported by different activities and teaching methods, both in traditional and online classes. Even the connectedness to a campus had a positive effect on students' interactions in classes. As students felt that they share similar goals and put effort all together for the same purpose, they engage more easily in the content, develop mastery or performance oriented goals and academic motivation, internalize the knowledge, and have a more satisfying social life. Thus the literature supports the framework of McMillan and Chavis (1986), on the importance of spirit, trust, interaction, and learning for establishing a community.

## **Identity**

One of the horrors of World War II was the spectacle of high status groups (Nazi Germany) trying to wipe out low status groups, for example, Jews, Poles, because of differences. In order to understand intergroup relations, explain the occurrence of such heinous acts, what drove one group to make de-humanizing categorizations of others, how individuals defined themselves in to a higher or lower status, social psychologists had to search for the right concept (Hogg & Grieve, 1999). These attempts lead to the surge of interest in what came to be called Social Identity.

Leaving his home country- Poland in order to escape the persecution of Jewish people ,the theorist Tajfel had experienced categorizations of human being, discrimination, and prejudice first hand (Hornsey, 2008). His direct experience of the Holocaust had the most significant effect on his interests and later on his experiments. After his various experiments on categorization, Henri Tajfel and John Turner presented several works on social identity theory between 1974 and 1979. The term *identity* derives from the Latin word *identitas* which means *sameness, identical*. In his words, *social identity* was defined as “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the emotional significance attached to that membership” (Tajfel, 1974, p. 69). His work of 1974, on social identity and intergroup behavior represents a transition period in social identity theory with a focus on intergroup relations, “social categorization, social identity, social comparison, and psychological distinctiveness” (p.69).

Categorizations are usually based on similarities of the selves and represent differences among the groups, such that when one can define the self with a nationality such as Turkish, others will be represented by their nationality; when a person is ingroup for being Turkish, at the same time, he/she will be outgroup for other nations. However, multiple representations of identity are also possible (Turner et al., 1987).

In different experiments Tajfel and colleagues found out that people give more credit to their own group members (in-group) rather than members of other groups (out-group) when asked to give points to all members after they are given tasks (Tajfel, 1974). However, in a study on how students choose between NASA survival tasks and allocate

points to others, Hogg and Grieve (1999) discovered that students with less experience of the experiment presented more discrimination and had stronger ingroup identification, in addition to the discrimination association with uncertainty. Thus, under uncertain conditions individuals think that their ingroup is better. Garza and Herringer (1987) demonstrated the importance of social identity theory by asking an ethnically diverse college sample group to write their top ten social identities gradually. When categorizing their freely listed social identities in terms of frequency, they came up with “student, gender, religion, ethnicity, employment, hobbies, career goals, nationality, age, club memberships, interpersonal role, political affiliations, social groups, personal habits, life style, attitudes, social class, and personal characteristics” (p. 302). Overall occupation, associational memberships, recreational activities, and religion were the most used categorizations. An interesting finding supporting Tajfel’s theory was that depending on the importance a group represents, people would rank it higher, finding that categorizations were more representative of selves.

In a classroom context, ingroup and outgroup differences would be considered based on the experiences of fellow graduate students and class observations. First, new students meet each other and their professors during orientation. Later those pursuing the same program usually take the same courses, are involved in the same research projects, have the same advisors and this ends up forming a social group of individuals in the same program or department. Similarly, international students immediately come together forming a cultural group; and among these, the ones from the same or similar culture or country form another ingroup identity due to shared experience. Non-European and non-

native English-speaking international students are likely to experience negative feelings such as feeling outsiders, so they may identify themselves more with their home country or with other international students (Schmitt, Spears & Branscombe, 2003). There may be times when international or ethnic students state their discomfort in classes because topics culturally relevant to them are not discussed, or not encouraged. Schmitt et al. (2003) found that when students chose to identify with international students, discrimination negatively affected their self-esteem and psychological well-being.

Platow, Byrne, and Ryan (2005) investigated how university students and TAFE (Australian technical institution) students would respond to discrimination by manipulating their in-group status and intergroup behavior. They presented short made-up news about the superiority of one group to another on getting a full-time job and an employment opportunity, followed by measures of self-esteem. Members in the high in-group status condition were not affected much in any situation; however, the low-status group members had lack of self-esteem during out-group favoritism. And, very interestingly, high status group members did not recognize the discrimination; instead they presented it as “favoring our group is not all that unfair” (p. 607). In another study, college students’ moods based on formal/informal campus group status were compared with their self-determination by asking about their level of enjoyment, feeling special in group and perceptions of the group (Sheldon & Bettencourt, 2002). Students were most committed to groups in which their friends were members, and stated their ideas more freely.

White, O'Connor, and Hamilton (2011) explored the connection between class attendance and different identity influences on college students. Sense of community and internal motivation had an important influence on their attendance. Despite students favoring their ingroup membership behavior to decide whether to attend a class or not, their motivation to attend statistics class was the main factor on decision making. Furthermore, individuals' recognition of being out-group affected their well-being, performance, and motivation on the task negatively for lower status groups. However, for some others, it is possible to turn disadvantages into an advantage by focusing on tasks in which they excel (Laar et al., 2010).

Amiot and Sansfacon (2011) explored the self-determined motives that are associated with identifying with an ingroup, and the consequences of such identification. They found that self-determined motivations to identify with a group had a positive effect on well-being of group members, but intrinsic motivation and amotivation brought more negative consequences. Individuals with amotivation to identify with a group were even explained as possibly experiencing dis-identification, "being outside of the self."

## **Conclusion**

In sum, studies on K-12 learners and college students have shown the importance of the fulfillment of basic needs on students' academic motivation. To fulfill their needs for relatedness, individuals form groups based on their past and current experiences. The groups formed influence how individuals make decisions, shaping their behaviors. Hence, for my study, I aimed to explore the inter- and intra-personal

factors associated with graduate students' academic motivation using Self Determination Theory as the main framework, the first area of the literature I reviewed in this chapter. Then, through students' perceptions of the learning environment with which they are in contact, and the support and encouragement received by others in their learning settings, I reviewed the literature on the consequences of either fulfilling or not fulfilling the need to belong by way of the literatures on classroom community and social identity.

## **Chapter 3**

### **Method**

This study was aimed at investigating the relationships among students' sense of learning community; the basic need of relatedness; and motivational reasons for attending graduate school. Specifically, I explored how students' perceptions of the learning environment and connections with their peers affected their academic motivation. I also explored whether the results would vary among international and native students, different age groups, field of study and gender. Basically, the relationships among the two basic psychological needs and types of self-determined motivation were analyzed. The relationships between each psychological need and students' emotions in the classroom were also examined.

It was hypothesized that self-determined motivation would be influenced by emotions and the relationship between students' interactions within their social environment, and that this relationship would be stronger for international students. To investigate the connections among these variables, t-tests and bivariate correlation were used. This chapter presents a description of the method of the study, with research questions, participants, measures, procedures, and analyses.

### **Research Questions**

1. Will graduate students' self-determined motivation be associated with the nature of their perceptions of the interactions they have with classmates and the instructor in class?

2. Will international students be more affected than non-international students by the use of culturally local examples or experiences used by the instructor or other students in instruction?
3. Are higher levels of feeling ingroup during a class associated with higher scores on the intrinsic motivation scales and with lower scores on the extrinsic motivation and amotivation subscales?
4. Are there any differences on the learning community and self-determined motivation subscales between groups representing gender, age levels, disciplines, ethnicity, and years spent in graduate school?

## **Participants**

From various disciplines of a large research university, 248 graduate students (89 male, 121 female, 38 unknown) participated in this study. List-wise deletion was used for missing data. Demographics are reported in Table 1 for the participants who provided all responses. They ranged in age from 22 to over 50 years, while most of them were between 24 and 29 years old (n=100, 40.3%), followed by the 30-35 range (n=51, 20.6%), 36-42 range (n=25, 10.1%). They reported being enrolled in various fields of study and I categorized them as business (n = 27, 10.9%), engineering (10.1%, n = 25), education (8.9%, n=22), communication (15.7%, n = 39), natural sciences (n=35, 14.1%), liberal arts (22.2%, n=55). However 7 students (2.8%) gave a general area such as “social science (38 individuals did not respond to this question). All students identified their ethnicity in one or more of the categories of Native-American (Indigenous), Asian-

American, Asian, Black, Mexican American, Puerto-Rican, Hispanic, White-European descent, and White-Middle Eastern descent. The majority of the students were of European descent with 53.6%, n=133 and all other ethnic groups were below 10%. Finally, there were 16 students who identified themselves in two or more categories, and two students who chose the option “other.”

Overall, 248 people started the survey and finished Questionnaire 1, with 34 not continuing any further. Therefore, only 214 students filled out both Questionnaire 1 and Questionnaire 2. Among these 214 participants, four failed to provide their demographics.

Table 1 Demographics

	N	%
<b>Gender</b>		
Male	89	35.9
Female	121	48.8
Missing	38	15.3
Total	248	100.0
<b>Age</b>		
19-23	15	6.0
24-29	100	40.3
30-35	51	20.6
36-42	25	10.1
43-more	19	7.7
Missing	38	15.3
Total	248	100.0
<b>Status</b>		
International	45	18.1
Not-international	165	66.5
Missing	38	15.3
Total	248	100.0

Table 1 (continued)

<b>Discipline</b>		
Business	27	10.9
Communication	39	15.7
Education	22	8.9
Engineering	25	10.1
Liberal Arts	55	22.2
Natural Sciences	35	14.1
other	7	2.8
Missing	38	15.3
Total	248	100.0
<b>Ethnicity</b>		
Native-American(Indigenous)	2	.8
Asian-American/Oriental/Pacific Islander	4	1.6
Asian	19	7.7
Black/African-American/African descent	5	2.0
Mexican-American/Chicano/Latino	10	4.0
Puerto-Rican	1	.4
Hispanic/Latino descent	5	2.0
White-European descent	133	53.6
White-Middle eastern descent	13	5.2
Multiple ethnic groups	16	6.5
Other	2	.8
Missing	38	15.3
Total	210	100.0

## Measures

The whole survey consisted of two research instruments and some demographic questions. The first research instrument was composed of a combination of different items from different surveys supplemented by a few items I wrote. I named this first scale the Learning Community Scale. The second questionnaire was the Academic Motivation Scale (AMS-C 28) for college students, adapted for graduate students. The third part involved demographic questions.

*The Learning Community Scale:* This instrument was composed of items from three different scales, the Basic Needs Satisfaction in Your College Course, the Sense of Classroom Community, and the Academic Classroom Community Scales created by Bush et al. (2004), Bush (2006), Summers et al. (2005). The Cronbach alpha values of the original scales ranged from .66 to .92, with the majority items having good level of internal consistency. In addition to adjusting these scales to my purpose, I added four items. The instrument was intended to assess students' connectedness, their positive and negative emotions experienced in their classes, and the reasons for these emotions. Each item was rated on a 7-point likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The distributed version of the total instrument contained 34 items; however after factor analysis, 28 items remained for data analysis.

*Academic Motivation Scale (AMS-C):* This scale was originally developed in French as Echelle de Motivation en Education (ECE) by Vallerand et al. (1992), than translated into English without any major changes. It consists of 28 items aiming to measure what type of motivation students are experiencing throughout their learning experiences. Vallerand identified seven categories of motivation which underlie the well-known intrinsic, extrinsic, and amotivation, with a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). In this study, the scale was changed to 1(not true of me at all) to 7 (exactly true of me).

In the scale, intrinsic motivation is divided into “to know, to accomplish things, to experience stimulation,” extrinsic motivation is divided into “external, introjected, identified regulation,” with amotivation its own category. Because the original scale was

developed for college students, I made some minor changes again to fit the sample of graduate students. The original scale had an internal consistency of .81, test-retest correlation ranging from .71 to .83, and similar results with the original French version on confirmatory factor analysis, indicating that the scale is reliable and valid (Vallerand et al., 1992). These authors also reported that the subscale of extrinsic motivation had an alpha of .62, which was supported by Cokley, Bernard, Cunningham, and Motoike (2001). In their study on American college students, Cokley et al. (2001) found that identified regulation had an alpha of .70, lower than the other subscales. To see whether there would be any changes depending on the sample, reliability analysis was conducted.

### **Procedure**

My first step was to send an email to graduate coordinators of several disciplines (schools of business, engineering, education, liberal arts, natural sciences, architecture) because it would have been difficult to reach each graduate student individually. In those emails, I asked graduate coordinators to forward my invitation to the survey, including some brief information about the purpose of the study, approximately how long it would take, the confidentiality of the participants' responses, a statement of the voluntary nature of the study, as well as the survey link. Although a few of them did not contact their students, most were very helpful. A web-based survey administration and analysis tool, Qualtrics, was used through university access. When participants entered the survey and agreed that they were a graduate student, they received a description of the study and its purpose, an explanation of their rights, the study's IRB approval information, my contact

information, estimated completion time of the study, and an informed consent statement. Then, the survey questions from all survey instruments were provided. At the end of the consent form, the students were once more asked whether they were willing to continue or not.

The whole survey was composed of two Questionnaires and some additional questions providing demographic information of participants. Though all items were strictly required to be responded to on a scale ranging from “1-strongly disagree” to “7-strongly agree”, participants did not have to continue if they did not choose to do so. This is the main reason why I could use 248 responses for the first questionnaire but only 210 responses for the second and further. The second questionnaire was composed of 28 items assessing their motivation types through statements about why they are enrolled in graduate school. The entire survey took approximately fifteen minutes to complete. Just prior to data analysis, all student identification numbers were removed from the file and deleted to avoid any privacy issues.

### **Data Analysis**

For defining which items worked best for the participants, and which ones composed clusters, I conducted a factor analysis on the first questionnaire. In addition to the items taken from different surveys, there were items I had developed. Therefore it was possible that some overlaps would occur or that some items may not have shown to be a clear measure of their intended purposes. Factor analysis is commonly used to improve the quality of surveys by grouping items that seem to measure the same

construct and identifying underlying dimensions that help in the interpretation of the outcomes (Reise, Comrey & Waller., 2000). In this study, principal component analyses were used with varimax rotation and a criterion value of .40 to keep items in a factor.

After the factors were identified, three items (26, 31, 32) with negative factor loadings, all in Factor1, named as *classroom community*, were reverse coded for further analysis. The items in Factor 2 were named as *positive support and respect from others*, and the items in Factor 3 all had negative meanings such as “I avoid asking questions if most of the people in a course are unfamiliar to me” with positive factor loadings; therefore the factor was named negatively as *feeling distressed by others or situations*.

Overall, six items were deleted from the original formation of the questionnaire, so the classroom community subgroup included 13 items, the second subgroup positive support and respect, had 9 items, and Factor 3- feeling distressed, had 6 items. Next, the average scores for each factor per person were calculated for further analysis.

Independent samples t-test was used to compare the means of groups and check whether there were any difference between them on any factor. Therefore, an independent samples t-test was conducted using SPSS to see whether there were any differences based on gender, and on being international or not. For the second survey, because the main structure was the same as in previous studies, factor analysis was not needed. The average scores for each of the seven motivation types were calculated per student. Then as with the first Questionnaire, t-tests were run using SPSS to check for differences between, men and women, and between international and non-international students.

After the factor analysis, reliability analyses were calculated for both scales, to see how consistent the items were in measuring their constructs. Then, bivariate correlation analyses were conducted with SPSS between the two questionnaires to determine the kinds of relations that existed within and between subscale scores. Because 38 students did not fill out Questionnaire # 2, correlations were conducted based on 210 students' responses. Lastly, t-tests for gender and international status, and one-way ANOVA and Tukey's posthoc tests were run on age, ethnicity groups, different disciplines, and number of years in graduate school, to see which groups differed significantly on each of the subscales.

## Chapter 4

### Results

In this chapter, I present my findings beginning with the factor analysis of the first questionnaire, Learning Community, followed by reliabilities for both scales in the survey. Then, I present the results of the bivariate correlations of the subscales, t-tests, and analysis of variance for each demographic variable with mean scores of each analysis. In the last section, I address the findings as related to each research question.

#### Factor Analysis for Questionnaire 1 - Learning Community

In collecting data, I used a survey with 34 items of which 4 items (17, 19, 20, and 21) were self-created and other items were taken from different scales intending to measure the idea of learning community. Therefore, to select the best fitting items for analysis and to make interpretation of results clearer, I conducted an exploratory factor analysis with principal components and varimax rotation analysis with a .40 absolute value cut point using the statistical software package SPSS.

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.900
Bartlett's Test of Sphericity	Approx. Chi-Square	3696.084
	df	378
	Sig.	.000

The Kaiser-Meyer-Olkin measure of sampling adequacy ranges from 0 to 1 and values between 0.5 and 1.0 show that the data are suitable for factor analysis. The higher the value is, the more appropriate the data are for factor analysis (Kalayci, 2008). For my

data, the value is 0.90, indicating that factor analysis is appropriate for these data. A significant Bartlett's Test of Sphericity also showed the existence of relation among variables, again showing whether that the data were suitable for factor analysis. For my data, Bartlett's test was highly significant ( $p < .01$ ).

With confidence in the results of KMO and Bartlett's Test, I used a three component solution to factor analysis, until reaching the final factors. The items with lower factor loadings than the cut-off point of .40 (items 4, 14, 24, 8, and 17) and one item (11) that loaded on both factors 1 and 2 were deleted. When the factor analysis was run a second time without these items, three factors made up the final factor solution, and these were named based on the content of the items.

Overall, the first questionnaire measured as Learning Community and was composed of 28 items in which factor 1-classroom community had 13 items, factor 2-positive support and respect had 9 items, and factor 3-feeling distressed was composed of 6 items. Factor 1 "Classroom Community" had 3 items with negative loading factors (26, 31, and 32) that were reverse scored for next analyses. Factor 2-"positive support and respect from others" had all positive loadings. All items in the last factor had negative meanings, with positive factor loadings therefore, instead of using reverse coding, I gave factor 3 a negative name; "feeling distressed by situations or others."

Table 3 Factor Loadings on Questionnaire #1

	Component		
	Classroom Community	Positive Support and Respect	Feeling Distressed by others/situations
31. In most of my classes, there are not many people that I am close to.	-.808		
27. I consider the people I regularly interact with in most of my classes to be my friends.	.791		
16. I know other people well in most of my classes.	.768		
29. People in most of my classes care about me.	.752		
18. In most of my classes, I feel connected to the other students and the teacher.	.732		
22. In most of my classes, I really like the people I interact with.	.720		
1. In most of my classes, I make friends with and get to know others in the class.	.717		
26. I pretty much keep to myself and don't have a lot of social contacts in most of my classes.	-.697		
34. Other students in my classes are generally pretty friendly towards me.	.694		
15. In most of my classes, I feel I fit in.	.691		
6. In most of my classes, the other students in class make me feel welcome.	.687		
25. I get along with people I come into contact with in most of my classes.	.674		
32. The people I interact with regularly in my courses do not seem to like me much.	-.634		
10. In most of my classes, interactions with my instructors are generally positive.		.792	

Table 3 (continued)

2. In most of my classes I feel as though my instructor respect each student.		.788	
7. In most of my classes, the relationship between the instructor and students is comfortable.		.755	
13. In most of my classes, the instructor supports students' comments.		.732	
3. In most of my classes, students' value other's opinions.		.672	
5. In most of my classes, the instructor gives me positive feedback when I make a comment in class.		.663	
9. In most of my classes, I respect my classmates.		.562	
28. I have been able to learn interesting new skills in most of my classes recently.		.455	
12. In most of my classes, I value each student's contribution to the class.		.432	
23. Often, I do not feel very competent in many of my classes.			.714
33. I do not feel very capable in most of my classes.			.702
20. In small group discussions, I feel uncomfortable being in the same group with unfamiliar students.			.657
19. I avoid asking questions if most of the people in a course are unfamiliar to me.			.618
30. In most of my classes I do not get much of a chance to show how capable I am.			.517
21. I feel uncomfortable when the instructor or other students mention a topic or example that I don't understand because it is culturally unfamiliar to me.			.506

## Reliability Analysis of Survey Measures

Internal consistency calculations were conducted for both scales. Based on the reliability calculations using 248 participants responses, the learning community scale had most of the subscales performing very well, with coefficient alphas equal to or larger than 0.70. When I conducted an overall reliability analysis using all 28 items (items 26, 31, and 32 were reverse coded), the Cronbach's  $\alpha$  was .81 representing a highly reliable scale. With  $\alpha$  level of .93, factor 1-classroom community had the highest reliability, followed by factor 2-positive support from others with  $\alpha$ =.84, and factor 3-feeling distressed by others/situations, had the lowest reliability,  $\alpha$ =.71, still holding an acceptable internal consistency.

For the second questionnaire, the Academic Motivation Scale, reliability analysis for the whole survey was high ( $\alpha$  =.81), with intrinsic motivation subscales having around .85 alpha levels. Extrinsic motivation-identified at  $\alpha$ =.72 and external regulation at  $\alpha$ =.77 showed acceptable internal consistency and introjected external motivation and amotivation subscales had good reliability levels, having  $\alpha$ =.85 or more (see Table 4 for number of items and alpha levels for each subscale).

Table 4 Reliability analysis for scales

	$\alpha$	# of items
<b><i>Questionnaire1-Learning Community</i></b>	.81	28
Classroom Community	.93	13
Positive Support and Respect from Others	.84	9
Feeling Distressed by Others/Situations	.71	6
<b><i>Questionnaire2-Academic Motivation Scale</i></b>	.85	28
Intrinsic Motivation-to know	.87	4

Table 4 (continued)

Intrinsic Motivation-toward accomplishment	.84	4
Intrinsic Motivation-to experience stimulation	.85	4
Extrinsic Motivation-identified	.72	4
Extrinsic Motivation-introjected	.86	4
Extrinsic Motivation-external regulation	.77	4
Amotivation	.89	4

### Correlation Analysis of Survey Instruments

Bivariate correlation analyses were conducted on all of the instruments (Learning Community Scale-Academic Motivation Scale) used in this study. Many of the correlations were found to be significant at the  $p < .05$  and  $p < .01$  significance levels. The strongest correlation was between Intrinsic motivation-toward accomplishment and Intrinsic motivation-to experience stimulation ( $r = .65, p < .01$ ) whereas the weakest correlation was between intrinsic motivation-to experience stimulation and factor3-feeling distressed ( $r = .017, p > .05$ ).

Not surprisingly, the correlation among the three subscales of the first questionnaire, classroom community, positive support and respect, feeling distressed by others, were significantly correlated ( $r = .46, -.34, -.21; p < .01$ ). Interestingly, the introjected extrinsic motivation had a strong positive relationship with intrinsic motivation- toward accomplishment ( $r = .50, p < .01$ ). Moderate correlations also existed between intrinsic motivation to experience stimulation and extrinsic motivation-introjected ( $r = .34, p < .01$ ). The results of the Pearson correlation analyses are included in Table 5 and the overall descriptives for the outcome variables are presented in Table 6.

Table 5 Intercorrelations among Questionnaire-1 and Questionnaire-2 subscales

	Factor 1- Classroom Community	Factor 2- Positive Support	Factor3-Feeling Distressed	Intrinsic M. To know	Intrinsic M. Toward accomplishment	Intrinsic M. Experience Stimulation	Extrinsic M. Identified Regulation	Extrinsic M. Introjected Regulation	Extrinsic M. External Reg.	Amotivation
Factor 1- Classroom Community	1									
Factor 2- Positive Support	.456**	1								
Factor 3- Feeling Distressed	-.337**	-.209**	1							
Intrinsic M.- to know	.092**	.208**	-.170*	1						
Intrinsic M.- toward accomplishment	.090	.172*	-.037	.736**	1					
Intrinsic M- experience stimulation	.065	.066	.017	.645**	.654**	1				
Extrinsic M.- Identified Regulation	.183**	.237**	.101	.133	.138*	.076	1			
Extrinsic M.- Introjected Regulation	.032	-.006	.206**	.285**	.503**	.338**	.229**	1		
Extrinsic M.- External Regulation	-.018	.000	.307**	-.176*	-.102	-.072	-.514**	.313**	1	
Amotivation	-.224**	-.326**	.262**	-.272**	-.235**	-.047	-.213**	.074	.095	1

\* Correlation is significant at the .05 level (2-tailed).

\*\* Correlation is significant at the .01 level (2-tailed).

Table 6 Overall Descriptives for Outcome Variables (n Min. Max. M SD)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Factor 1-classroom community	248	1.85	7.00	5.14	.97
Factor 2-positive support & respect	248	2.11	7.00	5.72	.71
Factor 3-feeling distressed	248	1.00	5.50	2.92	.94
Intrinsic M-to know	214	1.00	7.00	5.90	.91
Intrinsic M-toward accomplishment	214	1.00	7.00	5.21	1.20
Intrinsic M-experience stimulation	214	1.00	7.00	4.63	1.40
Extrinsic M-identified regulation	214	1.00	7.00	5.49	1.08
Extrinsic M-introjected regulation	214	1.00	7.00	4.40	1.54
Extrinsic M-external regulation	214	1.00	7.00	4.35	1.40
Amotivation	214	1.00	6.50	1.82	1.05

### Initial Analysis of Survey Variables

Analyses on each of the variables were conducted and analyzed for a number of the demographic factors captured in the questionnaire and presented below. For two categorical demographic variables (e.g. gender, international status), t-tests and for demographic variables with more than two categories (e.g. age, discipline) one way Anova were conducted to determine if there were significant differences among the sub-samples. For each of the ANOVA calculations, a test for homogeneity of variance was conducted and is reported along with each of the ANOVA outcomes. Additionally Tukey's post-hoc procedure was used to see which means were significantly different from the other.

- *t-test for gender:*

Significant differences (df= 208) did not exist between men and women on any the subscales of the first questionnaire, for classroom community ( $t=.195, p>.05$ ), positive support and respect ( $t=1.00, p>.05$ ), and feeling distressed ( $t= -1.47, p>.05$ ). Also, no significant differences existed between men and women on subscales of Academic Motivation Questionnaire (intrinsic motivation, extrinsic, amotivation). The means are presented at Table 7.

Table 7 Survey Outcomes for Means by Gender

	Male	Female
	N=89	N=121
Factor 1-classroom community	5.17	5.14
Factor 2-positive support & respect	5.78	5.69
Factor 3-feeling distressed	2.77	2.95
Intrinsic M-to know	5.94	5.90
Intrinsic M-toward accomplishment	5.20	5.25
Intrinsic M-experience stimulation	4.55	4.70
Extrinsic M-identified regulation	5.49	5.48
Extrinsic M-introjected regulation	4.35	4.33
Extrinsic M-external regulation	4.35	4.33
Amotivation	1.75	1.87

- *t-test for international status:*

There were some significant differences (df=208) between international students and non-internationals on the subscales of extrinsic motivation-external regulation ( $t = -2.018$ ,  $F = .214$ ,  $p < .05$ ) and factor1-classroom community ( $t = -3.45$ ,  $F = 3.265$ ,  $p < .01$ ).

International students reported significantly lower levels of external regulation and lower levels of classroom community than non-international students. No significant differences existed between international status on any of the remaining measures. The means are presented at Table 8.

Table 8 Survey Outcomes for Means by Internationals and Non-internationals

	International	Non-international
	N=45	N=165
Factor1_classroom community**	4.72	5.27
Factor2_positive support & respect	5.71	5.74
Factor3_feeling distressed	3.08	2.82
Intrinsic M.-to know	6.03	5.88
Intrinsic M.-toward accomplishment	5.45	5.17
Intrinsic M-experience stimulation	4.98	4.54
Extrinsic M-identified regulation	5.31	5.53
Extrinsic M-introjected regulation	4.15	4.49
Extrinsic M-external regulation*	3.97	4.44
Amotivation	1.62	1.87

- ***Independent Samples t-test for ethnicity:***

Because ethnicity was composed of many groups as presented in Table-1 on demographics (Chapter -3), the numbers of participants in each ethnic group were not

comparable. The only group with a substantial number was the White-European descent group. Therefore, I grouped the sample into European descent and non-European descent to conduct analyses.

On this analysis the Classroom Community subscale showed significant mean differences between the two groups ( $t=-2.379$ ,  $F= .611$ ,  $p<.05$ ). European decent white students reported significantly higher levels of classroom community than non-European descent students (Table 9).

Table 9 Survey Outcomes for Means by Ethnicity

	Non-European descent	White-European descent
	N=77	N=133
Factor1_classroom community*	4.94	5.27
Factor2_positive support & respect	5.75	5.72
Factor3_feeling distressed	3.00	2.80
Intrinsic M.-to know	5.81	5.97
Intrinsic M.-toward accomplishment	5.29	5.19
Intrinsic M-experience stimulation	4.62	4.64
Extrinsic M-identified regulation	5.47	5.49
Extrinsic M-introjected regulation	4.35	4.46
Extrinsic M-external regulation	4.44	4.28
Amotivation	1.90	1.76

- ***One-way Anova for age:***

The majority of the participants (n=100) were between ages 24 to 29 years, followed by 30-35 years (n=51). Significant differences ( $df$  4, 205) existed for age on the Factor2-positive support and respect ( $F=2.953, p<.05$ ), Factor3-feeling distressed ( $F=2.529, p<.05$ ), and amotivation ( $F=3.807, p<.01$ ) subscales. No significant differences existed among age groups on the remaining measures. The test of homogeneity of variances was significant only for the amotivation subscale. Results of the mean scores for all measures are found in Table 10.

To see among which pairs the significant differences lay, a Tukey's Post-Hoc procedure was conducted. On the amotivation subscale, the age group 19 to 23 years was significantly higher than the 30 to 35 years and 43 years or more groups ( $p<.05$ ). On factor2-positive support and respect, the 19-23 age group scored significantly lower than the 43-more age group and the 24-29 age group scored significantly higher than 43 or more years individuals ( $p<.05$ ). On factor3-feeling distressed subscale, the age group 19-23 years scored significantly higher than 43-more age group.

Table 10 Survey Outcomes for Means by Age

	19-23 N=15	24-29 N=100	30-35 N=51	36-42 N=25	43&more N=19	Total N=210
Factor1-Classroom Community	5.16	5.12	5.17	5.00	5.43	5.15
Factor2-Positive Support and Respect *	5.48	5.65	5.78	5.80	6.13	5.73
Factor3-Feeling Distressed *	3.43	2.91	2.82	2.80	2.47	2.87
Intrinsic M.- to know	6.03	5.84	5.96	5.99	5.93	5.91
Intrinsic M.- towards Accomplishment	5.17	5.24	5.24	5.24	5.14	5.22
Intrinsic M.- experience Stimulation	4.60	4.53	4.82	4.78	4.57	4.63
Extrinsic M.- identified regulation	5.27	5.44	5.70	5.52	5.26	5.48
Extrinsic M.- introjected regulation	4.47	4.49	4.28	4.86	3.82	4.42
Extrinsic M.- external Regulation	4.57	4.37	4.47	4.43	3.54	4.34
Amotivation **	2.50	1.93	1.58	1.83	1.32	1.82

\* $p < .05$  ; \*\* $p < .01$

- **One-way Anova for discipline:**

Significant differences ( $df$  6, 203) existed among disciplines on the Intrinsic Motivation-towards accomplishment ( $F=2.402$ ,  $p < .05$ ) and to experience stimulation ( $F=3.226$ ,  $p < .01$ ), Extrinsic Motivation-identified regulation ( $F=2.696$ ,  $p < .05$ ) subscales. No significant differences existed among disciplines on the remaining measures. The test of homogeneity of variances was significant for intrinsic motivation-toward accomplishment and extrinsic motivation-identified regulation, external regulation and factor 1-classroom community subscales. Results of the mean scores for all measures are found in Table 11.

Although the ANOVA result indicated a significant overall F for the subscale, Tukey HSD posthoc procedure did not give any significant differences for intrinsic motivation-towards accomplishment subscale. Education majors were significantly higher on the intrinsic motivation to experience stimulation subscale than natural science majors, and natural science majors were significantly lower on that scale than liberal arts majors. On the extrinsic motivation-identified regulation subscale, education majors had significantly higher mean scores than engineering majors, whereas engineering majors scored significantly lower than natural science majors on that subscale.

Table 11 Survey Outcomes for Means by Discipline

	Business N=27	Communication N=39	Education N=22	Engineering N=25	Liberal Arts N=55	Natural Sciences N=35
Factor1-Classroom Community	5.21	5.00	5.05	4.96	5.29	5.32
Factor2-Positive Support and Respect	5.65	5.78	5.96	5.62	5.64	5.79
Factor3-Feeling Distressed	2.76	2.67	3.20	3.01	2.85	2.92
Intrinsic M.- to know	5.69	5.94	6.13	5.78	6.13	5.70
Intrinsic M.- towards Accomplishment	4.75	5.00	5.73	5.33	5.51	5.08
Intrinsic M.- experience Stimulation*	4.40	4.43	5.16*	4.41	5.12*	4.06*
Extrinsic M.- identified regulation*	5.42	5.39	6.00*	5.02*	5.45	5.81*

Table 11 (continued)

Extrinsic M.- introjected Regulation	3.74	4.33	4.90	4.39	4.43	4.71
Extrinsic M.- external Regulation	4.44	4.17	4.51	4.14	4.38	4.64
Amotivation	1.78	1.94	1.60	1.60	1.99	1.76

- ***One-way Anova for number of years in graduate school:***

Significant differences ( $df$  4, 205) existed among groups of students with different years in graduate school on the Factor2-positive support and respect ( $F=4.95, p<.01$ ), Extrinsic Motivation-introjected regulation ( $F=2.60, p<.05$ ), and Extrinsic Motivation-external regulation ( $F=2.596, p<.05$ ) subscales. No significant differences existed among number of years in graduate school on the remaining measures. The test of homogeneity of variances was not significant for any of the scales. Results of the mean scores for all measures are presented in Table 12.

The Tukey's HSD results showed that individuals who were in their first, second, third and fifth year or more in graduate school were significantly higher on the positive support subscale than were fourth year students. However, posthoc test results did not give any significant differences among the groups formed by number of years in graduate school on introjected regulation and external regulation subscales even though the overall ANOVAs had indicated significant results.

Table 12 Survey Outcomes for Means by Years in Graduate School

	1 N=69	2 N=57	3 N=33	4 N=20	5 or more N=31	Total N=210
Factor1-Classroom Community	5.36	5.05	4.97	4.76	5.29	5.15
Factor2_Positive Support and Respect **	5.89	5.74	5.70	5.17	5.73	5.73
Factor3_Feeling Distressed	3.10	2.79	2.84	2.85	2.58	2.87
intrinsic1_to know	5.76	6.13	5.93	5.57	6.06	5.91
intrinsic2_towards Accomplishment	5.12	5.46	5.22	4.71	5.35	5.23
intrinsic3_experience Stimulation	4.48	4.82	4.66	4.64	4.64	4.64
extrinsic1_identified	5.69	5.45	5.26	4.99	5.64	5.48
extrinsic2_introjcted *	4.44	4.75	3.96	3.75	4.68	4.42
extrinsic3_external Regulation *	4.65	4.41	3.88	3.77	4.35	4.34
Amotivation	1.67	1.76	2.11	2.23	1.68	1.82

## Research Questions and Results

1. *Will graduate students' self-determined motivation be associated with the nature of their perceptions of the interactions they have with classmates and the instructor in class?*

To address this question, I used correlations between subscales for both surveys to see whether there was any connection. Students' interactions with their classmates and instructors were measured by the subscales measuring Learning Community, with its three factors of classroom community, positive support and respect, and feeling distressed (factors 1, 2, and 3). Items such as, "In most of my classes, the instructor gives me feedback when I make a comment in class" or "I pretty much keep to myself and don't have a lot of social contacts in most of my classes."

The results showed that the *classroom community subscale* was positively correlated with the *intrinsic motivation to know* ( $r=.092$ ,  $p<.01$ ), *identified regulation* subscale ( $r=.183$ ,  $p<.01$ ), whereas it had a significant negative correlation with the *amotivation subscale* ( $r= -.224$ ,  $p<.01$ ). Positive support and respect from peers and instructors was significantly correlated with the two intrinsic motivation subscales, *to know* ( $r=.208$ ,  $p<.01$ ), and *to experience stimulation* ( $r=.172$ ,  $p<.05$ ), and with the extrinsic motivation-*identified regulation* subscale ( $r=.237$ ,  $p<.01$ ), and it was negatively associated with *amotivation* ( $r= -.326$ ,  $p<.01$ ). The subscale, *feeling distressed by others or situations*, showed significant positive correlations with two extrinsic motivation subscales, *introjected* ( $r=.206$ ,  $p<.01$ ) and *external regulation* ( $r=.307$ ,  $p<.01$ ), and with the *amotivation subscale* ( $r=.262$ ,  $p<.01$ ), and it had a significant negative correlation with *intrinsic motivation- to know* subscale ( $r= -.170$ ,  $p<.05$ ).

1. *Will international students be more affected than non-international students by the use of culturally local examples or experiences used by the instructor or other students in instruction?*

The overall results indicated significant differences between international students and non-international students on the extrinsic motivation-external regulation subscale and the classroom community subscales, with international students mean scores slightly higher than non-internationals on the intrinsic motivation types and lower on the classroom community subscale.

However, one specific item on the surveys addressed the research question pointedly: “I feel uncomfortable when the instructor or other students mention a topic or example

that I don't understand because it is culturally unfamiliar to me." On that specific item, international students scored significantly higher than non-international students ( $t=4.40$ ,  $F=9.39$ ,  $p<.01$ ), indicating that international students feel more uncomfortable than others when the instructor or peers use culturally local examples.

Table 13 Group Statistics for item 21

Group Statistics					
	Q8_international/ not-int.	N	Mean	Std. Deviation	Std. Error Mean
item21	1	45	3.82	1.81	.27
	2	165	2.71	1.41	.11

Table 14 Independent Samples t-test results for item 21

		Levene's Test for Equality of		t-test for Equality of Means				
		F	Sig.	t	df	Sig-2 tailed	Mean diff.	Std. error of difference
Item 21	Equal variances assumed	9.39	.002	4.40	208	.000	1.11	.25
	Equal variances not assumed			3.82	59.29	.000	1.11	.29

2. *Are higher levels of feeling ingroup during a class associated with higher scores on the intrinsic motivation scales and with lower scores on the extrinsic motivation and amotivation subscales?*

Because I did not use a specific scale to measure feelings of ingroup–outgroup identification directly, I used the mean scores on the subscales of classroom community and positive support as an indicator of feelings of ingroup. Students who scored higher on these two subscales were expected to report higher feelings of ingroup in the learning environment. The subscale for feeling distressed by others or situations was defined as feeling outgroup.

The results revealed a positive association between feeling ingroup and experiencing higher levels of intrinsic motivation to know ( $r=.158, p<.05$ ), towards accomplishment ( $r=.141, p<.05$ ), and identified regulation ( $r=.23, p<.01$ ). Feeling outgroup was associated positively with introjected regulation ( $r=.21, p<.01$ ) and external regulation ( $r=.31, p<.01$ ), and negatively with intrinsic motivation to know ( $r=-.170, p<.05$ ).

Table 15 Survey Outcomes for Means by Ingroup/Outgroup

Descriptive Statistics			
	Mean	Std. Deviation	N
Feeling Ingroup	5.43	.72	248
Feeling Outgroup	2.92	.93	248
Intrinsic motivation to know	5.90	.91	214
Intrinsic motivation towards accomplishment	5.21	1.20	214
Intrinsic motivation to experience stimulation	4.63	1.40	214
Extrinsic M.-Identified Regulation	5.49	1.08	214
Extrinsic M.-Introjected Regulation	4.40	1.54	214
Extrinsic M.-External Regulation	4.35	1.40	214

3. *Are there any differences on the learning community and self-determined motivation subscales between groups representing gender, age levels, disciplines, ethnicity, and years spent in graduate school?*

Surprisingly, women and men did not differ on any of the variables. However, the youngest age group (19-23) experienced amotivation to a significantly higher degree than older (30 -35 and 43 and more) age groups ( $p < .01$ ). This youngest age group also showed lower levels of feeling positive support and respect compared to the oldest age group (43 and more), whereas the 24-29 age group had the highest level of feeling support and respect in their learning community ( $p < .05$ ). Education majors experienced more intrinsic motivation- towards experiencing stimulation than natural science majors ( $p < .05$ ). On the identified regulation scale, again education majors had higher levels than engineering majors whereas natural science majors had higher levels of identified regulation than engineering majors ( $p < .05$ ). Tukey HSD results revealed that students in their first, second, and fifth year or more were higher on the positive support and respect subscale, than fourth year students ( $p < .05$ ), with first year students having the highest mean score (5.89). Also, European descent white students were significantly higher on the classroom community measure ( $n=177$ ,  $p < .01$ ) than non-European descent students ( $n=77$ ). Similarly, international students ( $n=45$ ) had lower levels of sense of classroom community ( $p < .01$ ), and they were lower on the measure of external regulation than non-international students ( $p < .05$ ).

## **Chapter 5**

### **Discussion**

Students from all over the world come to the United States for graduate studies, and it is fascinating for all involved to see how individuals from various cultures with different experiences adapt to the same learning environment, sharing common experiences. Although many studies have focused on students in college and lower grades, graduate students have been less often studied, even though the many changes in their lives and the different ways they interact with professors brings interesting dimensions. Therefore, the aim of the study was to investigate what graduate students as emerging professionals experience in their learning environments via their interactions with peers and teachers. In addition I was interested in, their reasons for being enrolled in graduate school, and how their interactions and experiences were affecting their academic motivation. Thus, I explored the connection between learning environment factors (sense of classroom community, positive support and respect, feeling distressed by others or situations) as means for fulfilling their psychological needs for relatedness, and intrinsic motivation (to know, to accomplishment, and to experience stimulation); extrinsic motivation (identified regulation, introjected regulation, external regulation) and; amotivation to be enrolled in graduate education.

In this chapter, I will summarize findings for each of the research questions, and then discuss these in light of the literature on the topics of Self Determination Theory, Sense of Classroom Community, and Social Identity. After presenting the related

literature, I will address the limitations of the study, and provide implications for future research and practice.

## **Discussion of Findings**

*Research Question 1: Will graduate students' self-determined motivation be associated with the nature of their perceptions of interactions they have with classmates and the instructor in class?*

My hypothesis was that graduate students would be more motivated for the course when having good relations with classmates and instructor than when they have poor relations. The results of the bi-variate correlation analysis showed that students' positive sense of classroom community was associated with intrinsic motivation to know and identified regulation, and was negatively associated with amotivation.

Positive support and respect from peers and instructors were related to students' intrinsic motivation to know and to experience stimulation and to their identified regulation (extrinsic motivation), whereas again lack of positive support and respect were related to amotivation. Positive communication, support, respect, and being prepared before class were seen as some major prerequisites to form classroom community (Freeman et al., 2007). The vast majority of this research has been conducted with elementary and middle school students. For example, studies with lower grade to higher grade students have supported the need of relatedness and positive effects on cognitive performance and on emotional satisfaction (Baumeister & Leary, 1995).

When students feel distressed by external factors, they experience introjected regulation, external regulation, and amotivation, whereas they were significantly low on the intrinsic motivation to know. Booker (2008) supported the conclusion that college students' interactions with their professors were important indicators of their performance. Acknowledging that today's classrooms may be different, a study by Endo and Harpel (1982) reported that students process information better as they develop more of a sense of connection with peers and instructor. First year college students were more intrinsically motivated after developing good relations with peers and instructors (Freeman et al., 2007).

Overall, the results supported the hypothesis that positive experiences in the learning environment were related with higher degrees of academic motivation and negative experiences (feeling distressed) were related with the more extrinsic, less autonomous forms of regulation and also with amotivation. The interesting point was that identified regulation (the most autonomous form of extrinsic motivation type just before intrinsic motivation towards accomplishment) was positively correlated with sense of classroom community, whereas intrinsic motivation towards accomplishment did not show significance on any of the measures. This may indicate that students did not enjoy being challenged, even though being challenged is intrinsic to the nature of graduate studies. As an indicator of identified regulation, students may be counting graduate school as an important step to be passed before continuing on to their careers but not purely enjoying it, which is essential to the nature and expected purpose of graduate studies especially in a large research university. When we consider the findings from a

different perspective, students with positive experiences scored high on both intrinsic motivation (to know) and extrinsic motivation (identified regulation), which clarifies that the hypothesis was supported.

*Research Question 2: Will international students be more affected than non-international students by the use of culturally local examples or experiences used by the instructor or other students in instruction?*

In the culturally blended learning environment, it is harder to meet the needs of everyone, for both students and instructors. Considering the community, as well as international students, it is also not easy for native speakers to adapt to international students' pronunciation and behaviors. For example, international teaching assistants (ITAs) seem to be at a disadvantage compared to their American colleagues, because even an ITA with good English is more likely to make mistakes under pressure or with sudden questions (Li, Mazer & Ju, 2011). Even though teaching college students is different than simply being in the same class with them; it is possible that some of their peers would also find international students culturally irrelevant or incomprehensible. In addition, for international students, it is possible that they might not enjoy when culture-specific examples are given, because they may not understand the context of these examples.

In general, international students were lower than American students on the external regulation as well as on sense of classroom community. For the item about culture-specific examples, results supported the hypothesis indicating that international students are more affected by culturally local examples used in class. Both at the college

level and in graduate classes, international students have communication difficulties with their classmates and sometimes they perceive the host students' behaviors as dismissive and discriminating (Wadsworth, Hecht, & Jung, 2008). However, international students are ready for the possibility that Americans may have inaccurate knowledge and bias towards their culture, therefore they do not let perceived discrimination affect their academic performance (Wadsworth et al., 2008). It makes sense that in my study, international students were more sensitive to culturally local examples used in class, and they were lower in sense of community. It seems like international students can tolerate inaccuracy but not discrimination or underestimation. When they feel misperceived, it is not possible to feel a part of classroom community emotionally.

*Research Question 3: Are higher levels of feeling ingroup during a class associated with higher scores on the intrinsic motivation scales and with lower scores on the extrinsic motivation and amotivation subscales?*

With average scores on classroom community and positive support and respect subscales as the ingroup variable, the results revealed that students feeling ingroup reported higher levels of intrinsic motivation (to know, and towards accomplishment) and higher identified regulation. Individuals form groups as a reflection of a part of their own selves and seek compatibility among group members. Tajfel (1974) explained, "It can be assumed that an individual will tend to remain a member of a group and seek membership of new groups if these have some contribution to make to the positive aspects of his social identity; i.e. to those aspects of it from which he derives some satisfaction" (p. 69). In a learning environment, students would be looking for fellow

students with similar interests in addition to being supportive, encouraging to one another. Because ingroup identification brings a more positive self-perception, many studies have shown a positive association between ingroup identification and positive outcomes such as well-being, health, performance, and enhanced motivation (Amiot & Sansfacon, 2011; Laar et al., 2010; Ryan & Deci, 2003). Also, members of informal groups obtain better outcomes (Sheldon & Bettencourt, 2002). In U.S. universities, the learning environment of graduate schools is usually informal, and, individuals share a common purpose to learn and produce instead of seeking status over one another. Therefore, such an environment would be another factor that would contribute to the enhanced motivation of students.

The findings were partly in line with my expectations. I had predicted that perception of ingroup feelings would not be correlated with identified regulation which is an extrinsic motivation type. However, results were that perceptions of ingroup were associated with higher levels of both intrinsic and some levels of extrinsic motivations. Within social identity, enhancement of motivation is obtained also by keeping the authenticity of identity. Even individuals who do not belong to ingroup enhance their motivation and performance when group members support them and give them opportunity (Laar et al., 2010).

To the best of my knowledge, there has not been published a strong and directly relevant study to my hypothesis. However, it is possible to have interpretations from related studies. Sheldon and Bettencourt (2002) for the first time used Self Determination Theory in relation to social group differentiation. In their study, autonomy and

relatedness were used as the major components to measure group identification and how supportive a group is. They suggested that the more encouraging and respectful to the identity of the members (supporting autonomy) a group is, the more positive outcomes are found.

*Research Question 4: Are there any differences on the learning community and self-determined motivation subscales between groups representing gender, age levels, disciplines, ethnicity, and years spent in graduate school?*

The analysis of the demographic variables showed that women and men did not differ on their sense of classroom community and academic motivation, but did show some differences on the self-determined motivation scales. However, the majority of studies have claimed that female students are more effective in building relations and community than male students. For example, both in distance learning and blended learning environments, women were more interactive and supportive, whereas men were more critical and formal (Graff, 2003; Rovai, 2001). Therefore, women usually report a higher sense of community relative to men. In a study about students' course drop out and initial motivation towards a course, female students reported higher self-determined motivation (Vallerand & Bissonette, 1992). However, that I did not find gender differences in my study may be due to my sample, as previous studies have not focused on graduate students.

However, among age groups, students between the ages of 19-23 were less motivated (amotivation) to be in graduate school when compared to 30-35 and 43-older age groups. The same young group (19-23 years) reported experiencing less support,

compared to the 24-29 age group which had the highest support. If these students were in the same discipline or knew each other, than I could conclude as the sample size had an effect on the 24-29 age group (n=100) to have highest sense of community, while the sample size of the other two groups were below twenty students, therefore possibly leading such students actually to feel less sense of belonging. However, this cannot be more than a statistical artifact in this study. Instead, it is possible that these groups had different reasons for going to graduate school. Students in the youngest age group newly experience the responsibilities of a graduate student life whereas the older groups know what to expect and they chose to return to school with a more conscious choice. Brouse et al. (2010) investigated college students' motivational change with regard to their age and gender, using Vallerand's Academic Motivation Scale. As the years passed, a significant decline happened on students' motivation levels and women always had higher motivation, even during decline. Although there are not previous findings or support for my findings, it should be kept in mind that graduate students represent a very different group of learners than previous studies.

As to the number of years in graduate school, my hypothesis was that new students would be lower on sense of community and their motivation would increase even more as time passes. The only difference I found was that, students were in their 1<sup>st</sup>, 2<sup>nd</sup>, and 5<sup>th</sup> or more years in graduate school had more support and respect than 4<sup>th</sup> year students. This result is likely to be because of low sample size of 4<sup>th</sup> year students relative to others. However, it's also possible that there is more course work in the first years so students have more chance to see one another and have more shared experiences. In the

last years, they probably are more involved in research and are not in class that much. Partly supporting my study results, in an attempt to define international students' isolation in a U.S. campus, Erichsen and Bolliger (2011) reported that first year students and master's students were more tolerant to the self, and they reported less isolation than students in further grades, supporting one of the findings of my study. As well as second and third year students, women also perceived less respect and support as an addition to previous findings.

As to the discipline variable, education majors were higher on intrinsic motivation to experience stimulation than engineering students, and natural science majors were the lowest on that measure. Additionally, education majors were the highest on identified regulation followed by natural sciences and then engineering majors. For all majors, identified regulation was stronger than intrinsic motivation to experience stimulation. Even though I had expected differences in motivation among majors, natural science majors seemed affected the most by their emotions as reflected in their low levels of intrinsic motivation.

Finally, as for the ethnicity variable, European descent white students (n=177) had significantly higher scores on the classroom community measure than non-European descent students (n=77). Perhaps because European descent white students represented a higher percentage of their classes, it may be easier for them to build community. As hypothesized, the international students (n=45) had lower scores on measure of classroom community and higher scores of external regulation than non-international students. This supports my idea that the more fulfillment of relatedness will be associated with less

extrinsic motivation. And again the difference in sample size for the two groups may have influenced the findings. In U.S. academic programs international students have reported academic and social isolation in graduate school, and a low sense of classroom community both in their traditional and online classes (Erichsen & Bolliger, 2011). In their study investigating students' connectedness to their campus, Summers et al. (2002) also did not find any difference among ethnic groups. However, in line with my findings on measures of campus connectedness, women had higher scores than men, Summers et al. found that sophomores had a lower sense of connection than seniors, and natural science majors had the lowest sense of campus community.

Overall, my results suggested that classroom community and positive respect and support from peers and instructors are important for the fulfillment of basic needs of students in a learning environment, associated their motivation greatly. When students feel they are a part of the learning environment and perceive kind and encouraging behaviors around them, they feel ingroup. This directly influences their performance by motivating them to learn and accomplish, or at least to see the importance and value of their work. Among these graduate students, international students particularly seemed more sensitive to the use of cultural examples, and had more difficulty forming a sense of classroom community.

### **Limitations**

This study has many limitations that should be kept in mind in interpreting the results. First, despite its high reliability values with a three component structure, the

factor analysis reduced the items to focus only on relatedness. Before factor analysis, the scale had sufficient items to measure both relatedness and competence. However, after the factor analysis, the structure of the first scale had to change, and there were not enough items for competence to be represented. In addition, I did not measure autonomy at all, which is actually linked with two other needs, and might have provided a different insight.

According to Deci and Ryan's (2000) model, integrated regulation, a more autonomous form of extrinsic motivation exists than identified regulation. However, the Academic Motivation Scale did not have items measuring that construct. It would be relevant to add some items about integrated regulation for my sample group because integrated regulation requires the person to be involved with self-determination even without internal enjoyment (Deci & Ryan, 1990).

Third, the sample size was not large, and unequally distributed among the two important demographic groups, international students and non-International students. A larger sampling of these two groups might have yielded a better comparison on key contrasts.

Fourth, a separate scale measuring ingroup/ outgroup differences was not used and the items I used to measure the ingroup and out group variable were not exactly on target, leading to some extrapolation on my part. Also, the study is done in one phase starting right before spring break and continued for a few weeks after that, a busy time of the semester. Having it many times over the year would give more reliable results.

Last but not least, having a solely quantitative focus is an important limitation. For example, some participants sent emails telling about their experiences of cultural differentiation in class and feeling outgroup in some situations even though it was not required in the survey. These students asked me to emphasize their experiences, though in the end, I chose not to because it did not seem like a common experience. Therefore, having in depth interviews with students and instructors and observations would give a better picture and may show unexpected points that I have not considered. Also, I could not ask follow-up questions to get detailed information about the students' experiences, and in every class their experiences would vary even within the same program, so the study in its present form may not be targeted enough.

### **Implications for future research and for practice**

This study takes a small step to extend the literature and to investigate graduate students' experiences. More research is needed about graduate students, their motivation, well-being, and their interactions. In the future, studies of social identity in particular should be considered as an important separate construct, using multiple methods rather than the more simple approach I took in this study. Also, it is important to focus on a specific course and instructor, using quantitative and qualitative methods together. The surveys should be chosen carefully, and ensuring the validity of the scale that would measure all three basic needs is necessary. In an attempt to reveal the perceptions towards and of international students, instead of relying on Social Identity Theory, it would be interesting to use different theories such as Communication Theory of Identity

(Wadsworth et al., 2008). I believe it is not fair to speculate on ingroup/outgroup effects by using only quantitative data. Therefore, qualitative investigations, observations, creative social experiments are necessary.

Because usage of online tools such as Blackboard is a common experience in U.S., it provides an opportunity for the representations of identities and allows individuals to communicate with each other. Also, it is important to investigate both the instructors' perception, and the student's to have a fuller view representation. If these are done in comparison to face-to-face classroom experiences, with in depth interviews, and with observations as well as quantitative data, we would have invaluable insights of learners' world.

All in all, this study was a simple attempt and had several limitations. However, it showed promise for further investigation with a carefully designed multi-structured research. The findings will be helpful for both students and instructors to be sensitive about the examples they use in class. They should be aware of how important their behaviors can be in the learning environment. In addition, usage of cultural examples is important so giving more voice to students to present their own examples may be helpful to boost the sense of community. In support of my findings, this issue was also mentioned in the emails I received as one complaint of international students in some of their classes. It is important to realize that graduate students are not much different than other learners and they have fluctuating motivations. Hence, it is important to support them and to build an environment in which students and instructors respect one another for better outcomes.



16. I know other people well in most of my classes.
17. In most of my classes, the instructor encourages students to bring in related examples or ideas from their own culture.
18. In most of my classes, I feel connected to the other students and the teacher.
19. I avoid asking questions if most of the people in a course are unfamiliar to me.
20. In small group discussions, I feel uncomfortable being in the same group with unfamiliar students.
21. I feel uncomfortable when the instructor or other students mention a topic or example that I don't understand because it is culturally unfamiliar to me.
22. In most of my classes, I really like the people I interact with.
23. Often, I do not feel very competent in many of my classes.
24. People in most of my classes tell me I am good at what I do.
25. I get along with people I come into contact with in most of my classes.
26. I pretty much keep to myself and don't have a lot of social contacts in most of my classes.
27. I consider the people I regularly interact with in most of my classes to be my friends.
28. I have been able to learn interesting new skills in most of my classes recently.
29. People in most of my classes care about me.
30. In most of my classes I do not get much of a chance to show how capable I am.
31. In most of my classes, there are not many people that I am close to.
32. The people I interact with regularly in my courses do not seem to like me much.
33. I do not feel very capable in most of my classes.
34. Other students in my classes are generally pretty friendly towards me.

## Questionnaire 2: WHY ARE YOU GOING TO GRADUATE SCHOOL?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you are attending graduate school.

Not true of me at all	True of me a little	True of me moderately	True of me a lot	Exactly true of me
1	2	3	4	5

1. Because with only a college degree I would not find a high-paying job later on.
2. Because I experience pleasure and satisfaction while learning new things.
3. Because I think that a graduate education will help me better prepare for the career I have chosen.
4. For the intense feelings I experience when I am communicating my own ideas to others.
5. Honestly, I don't know; I really feel that I am wasting my time in school.
6. For the pleasure I experience while challenging myself in my studies.
7. To prove to myself that I am capable of completing my graduate degree.
8. In order to obtain a more prestigious job later on.
9. For the pleasure I experience when I discover new things never seen before.
10. Because eventually it will enable me to enter the job market in a field that I like.
11. For the pleasure that I experience when I read interesting authors.
12. I once had good reasons for going to graduate school; however, now I wonder whether I should continue.
13. For the pleasure that I experience when I see myself getting better in one of my personal accomplishments.
14. Because of the fact that when I succeed in graduate school I feel important.
15. Because I want to live "the good life" later on.
16. For the pleasure that I experience in broadening my knowledge about subjects that appeal to me.
17. Because this will help me make a better choice regarding my career orientation.
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.
19. I can't see why I go to graduate school and frankly, I couldn't care less.

20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.
21. To show myself that I am an intelligent person.
22. In order to have a better salary later on.
23. Because my studies allow me to continue to learn about many things that interest me.
24. Because I believe that a few additional years of education will improve my competence as a worker.
25. For the "high" feeling that I experience while reading about various interesting subjects.
26. I don't know; I can't understand what I am doing in school.
27. Because graduate school allows me to experience personal satisfaction in my quest for excellence in my studies.
28. Because I want to show myself that I can succeed in my studies.

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